**PHASE I:**

**REQUIREMENTS:**

1. **Accident Rate:** The number of accidents that took place for a particular period of time.

**Data Needed and Formula Applied:**

**Available Data:**

Aj- Number of accidents on section j during a certain time period.

**Required Data:**

Mj- Number of vehicle kilometers in millions on section j during the same time period

1. **Accident Frequency:** How often accidents take place in a particular place.

**Data Needed and Formula Applied:**

**Available Data:**

Ac is the critical value for accident frequency (= number of accidents).

Aj- Number of accidents on section j during a certain time period.

**Required Data:**

Lj -is the length of the road section

Favg- is the average accident frequency for all road sections.

1. **Accident Severity:** How severe is the impact of an accident?(Fatal or Grievous or Mild).

**Data Needed and Formula Applied:**

Severity = number of fatalities (f)\*9 + number of injured persons (b)\*3 + number of damaged vehicles (d)\*1

**Available Data:**

All the data are available.

**PHASE 2:**

**FURTHER DATA TO BE ANALYSED:**

After the requirements have been gathered the black spot can be identified. After identifying the black spot various other parameters are needed to be analyzed in order to find counter measure for accidents that are happening in that particular place.

**Parameters to be considered:**

**1.Type of accident**

* Single Vehicle
* Vehicle from Same direction
* Vehicle from Opposite direction
* Vehicle from Adjacent direction
* Overtaking
* Pedestrian
* Others

**2.Surface Condition**

* Snowy
* Icy
* Wet
* Dry

**3.Collision Type**

* Head on
* Rear end
* Nose to side
* Side to side
* Roll over
* Fixed object
* Pedestrian
* Others

**4.Vehicle Type**

* Automobile
* Minibus
* Pick up truck
* Truck
* Bus
* All others

**PHASE 3:**

**FINDING COUNTER MEASURES**

The final phase involves developing a simple application for predicting counter measures for accidents happening in these black spots.